



THOMAS G. NEWMAN,
EDITOR.

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"Excellence or Cheapness, Which?"
may be answered thus:

"Economy always pays;
The man who saves is wise;
And those content with *must* to-day,
Will surely one day rise."

We have Received a very good photograph of Mr. Heddon, and placed it in the BEE JOURNAL Album, kept on our desk for the examination of visitors.

Mr. Otto Kleinow says that he presented the bouquet of flowers to Mr. A. I. Root, at the Detroit Convention, mentioned on page 794 of the BEE JOURNAL for Dec. 16, 1885.

Mr. S. X. Clark, of Delavan, Wis., who was well-known to our readers as a correspondent, is dead. We have written for particulars, and as soon as they are received they will appear in the JOURNAL.

Prof. A. J. Cook has been appointed by President Cutting, of the North American Bee-Keepers' Society, a committee to confer with the Department of Agriculture at Washington, in reference to National apiculture. President Cutting says:

I have appointed Prof. A. J. Cook a committee to confer with the Commissioner of Agriculture, with reference to Apiculture and the U. S. Department of Agriculture.—From my personal knowledge of Prof. Cook's fitness for this position, I think he will accomplish much good for this Society.

To Ohio Bee-Keepers.—Dr. H. Besse, ex-President of the Ohio State Bee-Keepers' Association asks us to give the following notice. It came a day too late for our last issue, and it is therefore of but little use now:

As the time for holding our annual State Bee-Keepers' Convention is nearly at hand, I take the liberty to say that we will have a meeting at Columbus, on the 12th and 13th inst. and all interested in bee-culture are invited. Such will call at the Farmers' Hotel, when they will be instructed as to place of meeting. Important business will be transacted.

The United States Apicultural Station at Aurora, Ills., in charge of Mr. N. W. McLain, is a grand step in the right direction, by the United States Government. In a New-Year's letter to the AMERICAN BEE JOURNAL, Mr. McLain remarks as follows:

DEAR MR. NEWMAN:—I am diligently at work "plowing the ground," preparatory to the experimental work of the coming year. Oh, what a big field it is; and yet it is rich and promising. I hope that we may both see our work prosper, and bring forth gratifying success during the year upon which we have entered.

I will have a copy of the Annual Report of the United States Department of Agriculture mailed to each member of the North American Bee-Keepers' Society as soon as issued.

I wish to congratulate you, Mr. Editor, upon the enterprise you have shown in giving such a complete and accurate report of the proceedings of the annual meeting of the North American Bee-Keepers' Society. It is an excellent piece of reportorial work, and should be duly appreciated by your readers. I wish you and the AMERICAN BEE JOURNAL a "Happy and prosperous New Year."

We would thank Mr. McLain for his endeavors to aid the pursuit of bee-keeping by his many very interesting experiments, and we fully endorse what Brother Root says in *Gleanings* concerning it, which is as follows:

One of the many treats to which we listened at the Detroit Convention was the papers from Prof. McLain, whom we have before mentioned as employed by the Government, to test disputed matters in bee-culture. A very elaborate experiment was made to ascertain whether bees can puncture grapes. Not only were grapes innumerable provided, but many colonies of bees. The decision was in the negative.

We are pleased to mention that he has also succeeded in fertilizing queens by mechanical means. It is true, this has been accomplished before; but the Professor will probably soon be able to give directions so that any ordinary bee-keeper can manage the process with but little risk of failure. We have reason to feel thankful toward the U. S. Government for having furnished the means for such experiments; and we also rejoice that we have secured the services of so able a man. He promises to furnish articles for the different bee-periodicals in due season.

"Success in Bee-Culture, as practiced and advised by James Heddon," is the title of a pamphlet on bee-culture just received. It consists of 128 pages; is well-printed on good paper and illustrated. It covers the whole field of practical apiculture, and is intended for specialists and those who keep bees for the money to be obtained from the business. In his preface the author says:

In the delineation of methods of management, and of implements and devices, appertaining thereto, it has been my constant aim to present such only as will approximate uniform and unvarying success, as nearly as possible, when the requisite conditions have been complied with, and thereby obviate the disappointments and vexatious losses, resulting from the complicated and impracticable in both management and utensils. In short, the instruction herein given, is from the dollar-and-cent basis—the financial results to accrue therefrom, and not from the vagaries and inconsistencies of empiricisms, aiming to present the new and useful rather than mere repetition of the old.

At this season of the year we are too busy to read a book through and review it (that we shall do hereafter), but after reading several chapters we are sure that its perusal will handsomely pay every honey-producer. It can be obtained at this office for 50 cents.

More Misrepresentations About Comb Honey.—The *Advance*, a religious paper of this city, dated Dec. 31, 1885, contains the following misrepresentations about comb honey being manufactured, etc., etc., signed "R. W.":

The time was, until recently, that if one got honey in the comb, he was sure about it. But all that is changed. Men have learned not only to manufacture the comb much more rapidly and cheaply than the bees can do it, but now fill it, capping the so-called honey-cells by machinery, and sell it at a lower figure than any at which the real honey can be produced. Some of our readers know unscrupulous men in the country who having bought a few hives of bees, almost immediately began selling great quantities of honey in the comb. They procured it from the manufacturers of the adulterated article, but any one familiar with the taste of the real honey easily detects the fraud. I went to one grocer in this city, who had recently purchased from Ohio, a thousand pounds of what he honestly supposed real honey, and convinced him in five minutes that almost the entire quantity was made up of syrups, deftly secured in the comb. He simply said, "What are we coming to?" We have no State laws sufficiently guarded in their provisions to reach these rascals, and punish them as they deserve.

The author of the article is the Rev. Robert West, who has been deceived by that "scientific pleasantry" (lie) of Prof. Wiley, and has unwittingly reiterated the falsehood—giving it a fresh impetus, greatly to the injury of the industry of bee-keeping. As "Manager of the National Bee-Keepers' Union," we have requested the author to publish a full retraction and apology in the *Advance*, or take the consequences of a lawsuit. That is the only way to counteract such misrepresentations and falsehoods.

New Price-Lists have been received from the following persons:

A. I. Root, Medina, O.—40 pages—Bee-Keepers' Supplies of all Kinds.

Paul L. Viallon, Bayou Goula, La.—16 pages—Implements for the Apian.

I. R. Good, Nappanee, Ind.—1 page—Italian Bees and Queens.

C. W. Costellow, Waterboro, Maine—16 pages—Aplarian Supplies.

James Heddon, Dowagiac, Mich.—30 pages—Prospectus of his New Book, "Success in Bee-Culture"—price 50 cents.

D. Landreth & Sons, Philadelphia, Pa.—98 pages—Seed Catalogue.

E. R. Badger, Rochester, N. Y.—16 pages—Incubator and Brooder.

Any one desiring a copy of either of them, can do so by sending a postal card to the address as given above.

The Cincinnati Illustrated Graphic, of Jan. 16, will contain a double page illustration of the Cherokee Nation, again brought so prominently before the public by the leasing of six million acres of their land. Pictures will be given of Chief Bushyhead and other prominent Cherokees, and of their principal buildings. Accompanying this pictorial effort will be a full and interesting history of the Nation, by the well-known author, John R. Musick.

If You Want a handsome Calendar for 1886, get Hood's Household Calendar. You may search for days, but you will not get one more artistic, more beautiful, or more convenient than that issued by the proprietors of Hood's Sarsaparilla. Ask for it at your druggist's, and if you cannot get it there, send 6 cents for one copy, or 10 cents for two, to C. I. Hood & Co., Lowell, Mass.

Early American Apicultural History.

FROM 1860 TO 1871.

The Early History of Bee-Keepers' Societies in America is very interesting, and we feel sure that the following condensed history, covering a period from 1860 to 1871, will be devoured by thousands of our readers with considerable relish. It is condensed from hundreds of pages in the early volumes of the AMERICAN BEE JOURNAL, and many other sources:

First Bee-Convention.

The first Convention of the bee-keepers of America was held at Cleveland, O., on March 15, 1860. The following persons were then elected as officers:

President—Prof. J. P. Kirtland.
Vice-President—Wm. M. Cunningham.
Corresponding Sec'y—E. T. Sturtevant.
Recording Sec'y—J. Kirkpatrick.
Treasurer—E. Gallup.

The first question discussed was: "What is the best mode of wintering bees?" The Rev. L. L. Langstroth was present, and advocated cellar-wintering. Others favored burying them in clamps. The subjects afterwards engaging their attention were ventilation of hives, feeding bees, robbing, feeding rye flour for pollen, Italian bees, swarming, bee-houses, etc.

When this Convention was held there were no periodicals devoted to the pursuit of bee-culture in America, and the report of the Convention was published in the "Ohio Farmer." Mr. Samuel Wagner started the Monthly AMERICAN BEE JOURNAL in the following January (1861), and in the March number of the BEE JOURNAL he re-published the proceedings under the heading of the "First American Bee-Keepers' Convention," and editorially remarked as follows:

"We take pleasure in placing on record in our columns, the proceedings of the first American Bee-Keepers' Convention, which met at Cleveland, O., on the 15th of March, 1860. The time is approaching when bee-culture will occupy a higher position than it has yet held in this country, and when it will be interesting to trace back its history to those pioneer movements which conduced to revival and progress."

The Second Convention

was held in Cleveland, O., on March 14, 1861, President Kirtland in the chair. The discussions were mostly on the adoption of the movable-frame hives, and a resolution was passed welcoming the advent of the AMERICAN BEE JOURNAL, and recommending it to all bee-keepers. This meeting was adjourned to Nov. 21, 1861, when a semi-annual meeting was inaugurated.

The Third Convention

was called to order by President Kirtland on Nov. 21, 1861, and the members discussed many important matters, among them wintering, feeding, and handling bees.

On account of the Civil War, attention was called from the pursuit of bee-keep-

ing, the AMERICAN BEE JOURNAL was suspended for 4½ years, and we know of no Convention of bee-keepers of any importance until 1866.

Other Conventions Organized.

The Wisconsin Bee-Keepers' Association was formed in Madison in 1866.

On Oct. 4, 1867, the "Northwestern" was organized, in Des Moines, Iowa, on the State Fair Grounds, about 150 bee-keepers being present; no business of any importance seemed to have been done. R. R. Murphy was elected President, and M. M. Baldrige, Secretary.

The Kentucky Bee-Keepers' Association was formed at a Convention held in Lexington on Nov. 20, 1867. Dr. John Dillard was elected Pres., and W. Spencer, Sec.

The Michigan Bee-Keepers' Association was formed on April 7, 1869. Mr. E. Rood was elected its first President, and Prof. A. J. Cook its first Secretary. The first Convention lasted two days, and the discussions extended over nearly the entire field of the apicultural pursuit. Its second Convention was held on Sept. 21, 1869, and Mr. A. F. Moon was elected President. Both meetings were held at Jackson, Mich.

The Ohio bee-keepers met in Convention at Toledo, O., on Sept. 15, 1869, and adjourned to Cleveland at the call of the Secretary, Mr. J. F. Martin. The Cleveland Convention was held on Jan. 14, 1870, when it was decided to hold annual sessions thereafter. This was the continuation of the first American Bee-Keepers' Society (formed in 1860), and the President, Dr. Kirtland, and Secretary, E. T. Sturtevant, were re-elected.

The Chautauqua Co. (N. Y.) Bee-Keepers' Association was organized on Jan. 29, 1870, by adopting a constitution and by-laws and electing T. S. Moss President, and C. E. Benton, Secretary and Treasurer. It was decided to hold the first annual Convention at Mayville, on Sept. 20, 1870.

The Northeastern (New York) Bee-Keepers' Association was instituted in March, 1870; but we can find no minutes of that meeting. A semi-annual session was held at Utica, N. Y., on Sept. 27 and 28, 1870. At this meeting it was agreed to institute a National Convention, and a call was issued for such to be held at Cincinnati, O., in February, 1871.

The Michigan Bee-Keepers' Association met at Lansing on March 23, 1870. President A. F. Moon strongly urged the formation of a National Bee-Keepers' Society, and several letters were read from prominent apiarists, urging the formation of such a Society. After considerable discussion the following was unanimously adopted:

"WHEREAS, The subject of a National Bee-Keepers' Association was much talked of at our last gathering; and

"WHEREAS, In our judgment, the time for the same is fully come; therefore

"RESOLVED, That we issue a call for a National Bee-Keepers' Association to be held in the city of Indianapolis, Ind., on the 10th and 11th of August next."

The date was afterwards changed to Dec. 21, 1870, as will be seen by the following, which is copied from the AMERICAN BEE JOURNAL of February, 1871:

North American Bee-Association.

On Feb. 10, 1870, Prof. A. J. Cook, Secretary of the Michigan Bee-Keepers' Association, issued a circular, which he mailed to the members of that Association, to the prominent bee-keepers of other States, and to the press, inviting everybody interested to meet at Lansing, Mich., on the 21st of March, for the purpose of

discussing special questions on the subject of bee-culture, prominent among which would be the holding of a National Bee-Keepers' Convention, at some central point during the year. On the day announced, the Convention was held at Lansing, and the question of holding a National Convention was discussed with the wildest enthusiasm. As was anticipated, the discussion resulted in a call to the bee-keepers of America for a National Convention, to be held in Indianapolis, Ind. The location was happily chosen, and has given very general satisfaction, it being centrally located, and readily accessible by a complete net-work of railroads.

Accordingly, on Dec. 21 (the day finally fixed upon), a large number of the most prominent and enterprising of bee-keepers of the United States and Canada, met in convention at the House of Representatives, in Indianapolis, and held six sessions, the last one ending at midnight on the 22d of Dec., 1870. Every seat in the house was occupied; the States represented being Indiana, Illinois, Michigan, Ohio, Wisconsin, Kentucky, Iowa, New York, Tennessee, Missouri, and Pennsylvania. Delegates were also present from Utah and Canada. On the whole, it is safe to assume that never in the history of America has bee-culture been represented in a Convention by so large an assemblage of wide-awake, intelligent, and enterprising bee-keepers.

The Convention was called to order at 10 a.m., by A. F. Moon, President of the Michigan Bee-Keepers' Association, who was elected temporary President, and M. M. Baldrige, of Illinois, temporary Sec.

On motion of Dr. Bohrer, of Indiana, a committee of one member from each State represented, was appointed to prepare a Constitution and to nominate officers, viz: Z. S. Richardson, of Indiana; Ezra Rood, of Michigan; D. L. Adair, of Kentucky; M. L. Dunlap, of Illinois; Aaron Benedict, of Ohio; Adam Grimm, of Wisconsin; Elisha Gallup, of Iowa; Dr. T. B. Hamlin, of Tennessee; Robert Bickford, of New York; W. D. Roberts, of Utah Territory; Daniel McIlvain, of Pennsylvania; J. L. Smith, of Missouri, and Wm. F. Clarke, of Canada.

This committee reported a Constitution which with a few amendments was adopted; and recommended the following as officers during that meeting:

President—A. F. Moon.
Vice-Presidents—Elisha Gallup and Dr. G. Bohrer.
Secretary—M. M. Baldrige.
Assistant Sec'y—Wm. F. Clarke.
Treasurer—N. C. Mitchell.

The report was adopted, and President Moon thanked the Convention for the honor conferred upon him, and expressed the desire that it might be the means of promoting the best interests of the Association, and bee-culture generally.

The exhibits at this Convention were: 18 movable-comb hives; 3 cages for fertilizing queens in confinement; 3 queen nurseries; 2 bee-feeders; 1 trap for catching queens and drones when leaving the hives; 1 wax-extractor; and 4 machines for extracting honey from the combs.

The election of officers for the ensuing year was then announced as in order.

On motion of R. C. Otis, of Wisconsin, the Rev. Mr. Langstroth was made an honorary member of the Association.

In view of what Mr. Langstroth has already done in promoting the interests of bee-keeping, not only in this but in other countries by the introduction of an improved system of bee-management, Mr. Otis moved that Rev. L. L. Langstroth, of Oxford, O., be crowned with the honor of being the President of the North American Bee-Keepers' Association for the ensuing year.

The motion was warmly seconded, and there being no other nomination, Mr. M. L. Dunlap moved that President Moon be authorized to cast the unanimous vote of the Association.

The motion prevailed, and the tellers announced the result of the ballot. On motion the Secretary was instructed to notify Mr. Langstroth of his election.

On motion of Mr. W. F. Clarke, the Constitution was amended so as to provide for three additional Vice-Presidents, making the number five instead of two.

The following officers were unanimously elected:

Vice-Presidents—Wm. F. Clarke, Ont.; Dr. T. B. Hamlin, Tenn.; Robert Bickford, N. Y.; Elisha Gallup, Iowa; A. F. Moon, Mich.

Secretary—M. M. Baldridge, St. Charles, Ills.

Treasurer—N. C. Mitchell, Indianapolis, Ind.

The following resolution was adopted:—RESOLVED, That the Executive Committee be instructed to publish the proceedings of this Association in pamphlet form at the earliest practicable day, provided the funds will warrant, and that the Secretary forward a copy to each member as soon as published.

The following were admitted as honorary members:

Samuel Wagner, editor of the AMERICAN BEE JOURNAL, Washington, D. C.; M. Quinby, author of "Mysteries of Bee-Keeping," St. Johnsville, New York; E. S. Tupper, Brighton, Iowa; Rev. John Dzierzon, Karlsmarkt, Lower Silesia, Germany; A. Schmidt, editor of the "Bienen-Zeitung," Eichstadt, Germany; L. Gerster, inventor of the Wax-Extractor, Berne, Switzerland; T. W. Woodbury, Mount Radford, Exeter, England; Major Von Hruschka, Germany, inventor of Mel-Extractor.

As the Rev. L. L. Langstroth was not present, he was notified of his election as President, and accepted it, adding that he hoped "that the interests of practical and scientific bee-keeping may be greatly advanced" by the organization.

The topics discussed were: Management of an apiary; diseases of bees; Italian and Egyptian bees; swarming and increase by division; queen-rearing; bee-pasturage; transferring bees; marketing honey; comb foundation, etc.

The Convention adjourned to meet in Cleveland, O., on Wednesday, Dec. 6, 1871, at 9 a.m.

American Bee-Keepers' Association.

The Cincinnati "Gazette" remarks as follows:

"Various States of the Union, either singly or two or three of them united, have formed bee-keepers' associations, but hitherto no national association has existed in this country. The impetus given to bee-culture by the discoveries of Huber, the distinguished Geneva apiarist, at the close of the last century, has sent hundreds into that pursuit. The progress of skill and knowledge in it has not lagged behind the advance made by science and skill in other departments of knowledge and industry since the blind Huber died. The necessity of associated action and effort for the benefit of bee-culture has been widely felt and that feeling has been manifested in forming numerous local associations.

"About a year ago, two of these associations, at nearly the same time, conceived the idea of issuing a call for a convention to form a national organization. One of them was the Michigan, the other the Northeastern Bee-Keepers' Association. The North American Bee-Keepers' Association, organized at Indianapolis last

December, and the American Bee-Keepers' Association, organized here, are the results of calls issued by the above local bodies respectively, viz: the Michigan and the Northeastern. Between these associations there has been some controversy—with but little, if any, ill feeling—as to the claim of priority in issuing the call for the National Convention.

"The Convention called by the Michigan Association met in December last; that called by the Northeastern Association is the one in session now in this city. Both associations have the same man, the Rev. L. L. Langstroth, of Oxford, O., for President. Many members of the Association formed yesterday are members of the North American formed at Indianapolis. Mr. Langstroth, of the former body, in retiring from the active duties of the chair last evening, called to officiate as Chairman of the American, the Rev. Mr. Van Slyke, of the Northeastern Association. The union of the two National Associations at their next meeting, which, for both, is at the same time and place, is a moral certainty."

About 150 delegates from various States assembled in Convention at 1 p.m., and an organization was effected by electing Rev. Wm. F. Clarke, of Toronto, Chairman.

Gen. D. L. Adair, of Kentucky, moved to adopt a Constitution, which he presented, and make this Convention an Association, to be known as the American Bee-Keepers' Association.

This was objected to as needless, since we have already a North American Bee-Keepers' Association. Mr. H. A. King, of New York, favored Gen. Adair's motion. This would be the first step toward uniting the North American Association and the one proposed to organize here.

Dr. Bohrer, of Indiana, a delegate to the Convention that met at Indianapolis, Dec. 21, 1870, spoke in favor of maintaining good feeling. He desired that there should be but one Association, i.e., the North American or the American, as should be agreed.

Mr. R. C. Otis, of Wisconsin, moved, as an amendment to Gen. Adair's motion, to appoint a committee to negotiate for union with a like committee of the North American Bee-Keepers' Association.

Mr. H. A. King, of New York, moved to amend the amendment, that the Convention should first organize by adopting a Constitution, and then propose a union.

By carrying the previous question, the debate was cut off.

Mr. King's amendment to Mr. Otis' amendment was adopted.

The "American" Society organized by adopting a Constitution similar to the "North American," adopted at Indianapolis, and elected the Rev. L. L. Langstroth President, Rev. H. A. King, Secretary, Gen. D. L. Adair, and L. C. Waite Assistant Secretaries, N. C. Mitchell, Treasurer, and 15 Vice-Presidents.

The Rev. L. L. Langstroth took the chair, but being feeble, he called the Rev. E. Van Slyke, Vice-President for New York, to preside.

Rev. W. F. Clarke, the retiring temporary President, offered the following resolution, which was unanimously adopted:

"RESOLVED, That this Association, when it adjourns, adjourn to meet at Cleveland, O., at 9 a.m., on the first Wednesday in December, 1871, at the same time and place as the North American Bee-Keepers' Association; when, provided the other organization shall instruct its officers to do the same, the officers of this body shall resign, with a view of there

and then consolidating both associations into one."

On motion of Mr. Peck, amended by Mr. Clarke, Mr. King, Mr. Peck and Mr. Otis were appointed a committee to confer with a similar committee appointed by the North American Bee-Keepers' Association, with a view to a union of that with this organization, and report the same to this Association.

The topics discussed were: Winter management of bees; artificial swarming; prevention of natural swarming; Italian bees vs. hybrids and black bees; hindrances to bee-culture; drones; honey-plants; introducing queens; extracted honey, etc.

Mr. E. Gallup read an essay entitled, "Successful bee-keeping in a nut-shell."

The following were made honorary members: T. W. Woodbury, Mount Radford, England; F. W. Vogel, Lekmanshofel, Prussia; Rev. George Klein, Luethorst, Prussia; Andreas Schmidt, Eichstadt, Bavaria; Rev. John Dzierzon, Karlsmarkt, Silesia; Baron A. and Baroness L. Von Berlepsch, Munich, Bavaria; Prof. C. T. E. Von Siebold, Munich, Bavaria; Maj. F. Von Hruschka, Dolo, Italy; Dr. A. Dubini, Milan, Italy; Viscount De Saliceto, Milan, Italy; A. S. Packard, Salem, Mass.; C. V. Rely, St. Louis, Mo.

Statistics: 120 bee-keepers reported that they owned 5,051 colonies of bees; and the honey produced amounted to 83,065 pounds, and the average price it sold at, was about 30 cents per pound. Beeswax, 1,046 pounds—4,612 colonies were in movable frame hives, and 439 in box-hives.

The Rev. L. L. Langstroth was the recipient of an expression of the gratitude of bee-keepers (in the shape of a well-filled purse), and, by unanimous vote, he was accorded the special privilege of speaking when, and as long as he chose to do so, on any subject. He solved many knotty questions, and often "poured oil on the troubled waters."

This Association adjourned to meet with the North American at Cleveland, O., on Wednesday, Dec. 6, 1871, at 9 a.m.

The Two Associations Consolidated.

Pursuant to adjournment of both, the "American" and "North American" Bee-Keepers' Associations met in joint session at Temperance Hall in Cleveland, O., at 10 a.m., on Dec. 6, 1871. The President of both societies, the Rev. L. L. Langstroth, being absent on account of illness, Vice-President W. F. Clarke called the meeting to order, and, by unanimous vote, both associations were dissolved for the purpose of consolidation.

Moses Quinby was elected temporary chairman, and Rev. H. A. King temporary secretary.

By vote, all the officers of the dissolved associations present, were created a committee to present a constitution for permanent organization. This committee were: Rev. W. F. Clarke, Dr. G. Bohrer, A. F. Moon, Dr. T. B. Hamlin, S. Hoagland, Aaron Benedict, L. C. Waite, Gen. D. L. Adair, and N. C. Mitchell. The committee reported a Constitution, which was then unanimously adopted.

The following were elected a committee on honorary members: Messrs. Root, Moon and Bohrer. Their report was adopted. It read thus:

"Such persons as were made honorary members of both the North American Bee-Keepers' Association, held at Indianapolis, and the American Bee-Keepers' Association, at Cincinnati, be and they are hereby declared honorary members of this Society."

The Society then proceeded to the election of officers for the ensuing year, which resulted as follows:

President—M. Quinby, St. Johnsville, N.Y.
 Vice-Presidents—Aaron Benedict, O.; J. E. Hetherington, N. Y.; E. J. Peck, N. J.; Seth Hoagland, Pa.; D. L. Adair, Ky.; T. B. Hamlin, Tenn.; G. Bohrer, Ind.; Ezra Rood, Mich.; M. M. Baldridge, Ills.; R. C. Otis, Wis.; J. W. Hosmer, Minn.; E. S. Tupper, Iowa; S. A. Stillman, Mo.; L. J. Dallas, Kans.; W. D. Roberts, Utah; W. F. Clarke, Ont.; Hugh Cameron, D. C.
 Secretary—H. A. King, N.Y. Recording Secretary—A. J. Cook, Mich.; Corresponding Secretary, A. I. Root, O.; Treasurer, N. C. Mitchell, Ind.

The following business committee was appointed to serve during the session: Messrs. Clarke, Waite, Adair, Hoagland, Hosmer, Moon, and Mrs. Tupper.

Dr. Bohrer, of Indiana, offered the following resolution, which was adopted:

RESOLVED, That the proceedings of the North American Bee-Keepers' Association held at Indianapolis, and the American Bee-Keepers' Association held at Cincinnati, also of this session of the North American Bee-Keepers' Society, be published in pamphlet form, and a copy sent to each member of this Society free of charge, the expenses to be paid out of the funds in the treasury.

Mr. Rood, of Michigan, offered the following, which was adopted:

RESOLVED, That a committee on publication, consisting of Messrs. Adair, Mitchell and King, be appointed, and that they be empowered to employ assistants in reporting.

It was resolved, that when this Society adjourns it will adjourn to meet at the city of Indianapolis, Ind., on the first Wednesday in December, 1872, at 10 a.m.

The meeting was pleasant and instructive, and great harmony prevailed. Among others, the following resolutions were passed unanimously:

WHEREAS, Millions of wealth have been annually lost to the people through ignorance of bee-culture; and

WHEREAS, It is the desire and object of this Society to enhance improvement and prosperity in this regard; therefore,

RESOLVED, That we earnestly recommend the appointment of an apiarian professor in each of the Agricultural Colleges on the Continent, and that we respectfully call the attention of State and other executives to this subject.

RESOLVED, That the Secretary be instructed to forward copies of these resolutions to the Governors of all the States, Territories & Provinces in North America.

RESOLVED, That the thanks of this Society be tendered to our worthy President, Mr. M. Quinby, for the satisfactory manner in which he has presided over our meeting.

The topics discussed were: Why do bees swarm? why do bees rear queens? artificial swarming; can swarming be prevented? best method of handling bees to prevent anger; bee-pasturage; bee-keeping experience; transferring bees; honey-dew; extracted honey; comb honey; marketing honey; controlling the fertilization of queens; mortality among bees; wintering bees; feeding bees with rye meal, etc.

Addresses were given as follows: Gathering the nectar, and how to market it, by President Quinby; popular bee-keeping, by Rev. H. A. King; prize poem, by Rev. W. F. Clarke; the experiences of a beginner, by Mrs. Savery; bee-keeping for ministers, by Rev. W. F. Clarke; reconstructed comb, by Gen. Adair; honey from the linden, by Le Roy Whitford.

Adjourned to meet at Indianapolis, Ind., on Dec. 4, 1872.



REPLIES by Prominent Apiarists.

Moving Bees.

Query, No. 180.—When is the best time to move an apiary of 75 or more colonies from Wisconsin to the western part of Iowa?—N. S.

I should prefer the month of May.—G. M. DOOLITTLE.

In April or May would be an excellent time.—A. J. COOK.

In early spring, say a week or two before apple bloom.—DADANT & SON.

Under ordinary circumstances perhaps the spring.—C. C. MILLER.

I would say move them as soon as they have a general spring flight.—G. W. DEMAREE.

Early in the spring, and before there is much brood in the combs.—G. L. TINKER.

In the spring, before the colonies become populous, the combs full of honey, and the weather hot—say in May.—W. Z. HUTCHINSON.

In the late spring just after breeding has become well started, and before the combs become heavily loaded with honey. The reasons will be obvious to any one, even of small experience.—J. E. POND, JR.

"Much depends"—cool (not cold) weather, light hives, little brood, that the bees have had a thoroughly cleansing flight before starting, and may have the same soon after landing, are all favorable conditions in connection with the "time to move."—JAMES HEDDON.

Sections without Separators.

Query, No. 181.—What is the best width for a one-piece section to be used without separators, so the bees will not build combs between the starters? and will such sections hold one pound when filled?—E. T.

I prefer to use separators.—G. M. DOOLITTLE.

One and three-fourths to 2 inches; the latter will weigh about 1 pound.—DADANT & SON.

One and 5-12 inches, or 7 to the foot, is perhaps the best. The weight will vary slightly.—A. J. COOK.

I think that I should prefer sections 1½ inches wide. They will hold one pound if large enough, but not if they are 4¼x4¼.—C. C. MILLER.

After using sections of different widths for 3 years, I have about settled down to sections that are 4¼x4¼x7 to the foot, either with or without separators. When well filled these will hold one pound, when no separators are used.—W. Z. HUTCHINSON.

The best width for sections without separators is 1½ to 1¾ inches. I have

had many sections of these widths, nearly 6 inches square, built very true and regular without them. A section 4x5 inches will hold very nearly a pound.—G. L. TINKER.

After trying sections of different widths I prefer a section 1¾ inches wide with a scant ¾-inch opening, fitted closely in a case without separators. In a good season this size section will very nearly average a pound. There is really no such a thing as a "pound section"—there is always some variation in their exact weight.—G. W. DEMAREE.

About 1½ inches; they will not contain a full pound, as a rule. Sections 1¾ inches in width will average one pound when filled, and work well when used without separators. I should not think of using wider sections unless I used separators, and I prefer sections 1½ inches wide in my locality.—J. E. POND, JR.

Careful and extensive experience has caused me to decide in favor of a section whose width is scant 1½ inches, or "7 to the foot." I use them of that width, and 4¼x4¼ inches square, both with and without separators; in either case they average as nearly one pound gross as any size I can get.—JAMES HEDDON.

Introduction of Virgin Queens.

Query, No. 182.—Is the introduction of virgin queens generally practical?—C.

Not with me.—G. M. DOOLITTLE.

I think that it depends somewhat upon circumstances and the man.—C. C. MILLER.

Not unless they are just from the cell.—A. J. COOK.

With me it is; but it depends upon how, where and when they are introduced.—H. D. CUTTING.

I think that it would be fair to say both "yes" and "no." It is with "some folks."—W. Z. HUTCHINSON.

Not generally, but under many circumstances it is. It often requires much care to avoid loss, even with laying-queens.—G. L. TINKER.

I believe that it has been a common practice to introduce virgin queens when "just hatched," for many years. But the successful introduction of virgin queens of several days old is a more modern practice, and is not "generally practical," for the want of "general" knowledge as to the *modus operandi*.—G. W. DEMAREE.

Yes, it is with me. We must introduce to nuclei either these or cells, and I am most successful with the virgin queens, for I lose not more than one in ten.—JAMES HEDDON.

I should say not. As yet, however, the matter has not been sufficiently tested to allow of positive assertions. I have no trouble in introducing them, but I cannot see any gain made by so doing. I am positive that it will never pay a purchaser to buy them at any price, no matter how low.—J. E. POND, JR.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♂ north of the centre; ♀ south; ♂ east; ♀ west; and this ♂ northeast; ⊙ northwest; ⊙ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

Standard of Excellence for Honey.

REV. O. CLUTE.

Absence from the State prevented me from attending the regular meeting of the Iowa State Bee-Keepers' Association at Des Moines, in September last. In my absence I was made a member of a committee to prepare a standard of excellence to guide judges in awarding premiums on bees and honey at fairs.

I have not seen that any such standards have been prepared and adopted in other States, and it seems to me a difficult task to prepare such standards in such a way as to make them really valuable and acceptable. In the case of honey I suppose that the points on which a decision should turn are, first, flavor, second, color, and third, condition in which it is put up. Now as to flavor: It is an old proverb that "there is no disputing about tastes." Tastes differ as much as complexions do. Some people like white clover honey best, some basswood, some heart's-ease, some other brands. I have sent samples of white clover and of heart's-ease honey at the same time to the same commission dealer, not naming the honey myself, but simply saying that I could furnish either quality, and orders have come back for the heart's-ease in preference to the white clover, showing that at least some experts prefer the heart's-ease. I think it will be a little difficult to decide which flavor is "the best"—which shall be "the standard."

Then as to color, probably many will say that the crystal clearness and light color of the best white clover and basswood is to be desired. Well, such honey is certainly very beautiful. But why is light color necessarily any better than a tint? Light butter is not looked upon with favor. In butter, a rich yellow color is looked upon as so desirable that even the most reputable dairymen resort to artificial coloring to produce it, and by aid of this coloring they are able to make June butter in January. I have seen goldenrod honey whose rich, yellow, amber color was a great deal more beautiful in my eye than the best basswood honey I ever saw. Probably

a good many others would be of the same opinion. There will, hence, be some difficulty in fixing on a particular shade as being the standard by which all honey is to be judged.

Probably the only satisfactory solution of this difficulty will be found in classing honey as "white clover," "basswood," "buckwheat," "heart's-ease," "goldenrod," etc., endeavoring to make as many classes as there are distinct kinds of honey; then offer premiums on each class of honey, and endeavor to establish a standard color and a standard flavor for each class. But even this will not be an easy task.

It would be a good plan for some of our eminent bee-keepers to give in the BEE JOURNAL a statement of their views on this subject. I may have time soon to say a word on a standard of excellence in bees.

Iowa City, ♂ Iowa.

For the American Bee Journal.

Bee-Keeping in Cuba.

A. W. OSBURN.

I received a letter from a reader of the AMERICAN BEE JOURNAL, in which he asked: "How do you manage your bees in Cuba, to obtain such large results of extracted honey per colony?" Now, so much depends upon the circumstances that surround us at the time, that nothing more than a general idea can be conveyed in a short article.

As the reader is probably aware, our main honey-flow comes in December and January, and to get bees in condition to store honey in the winter, requires different treatment from what is necessary in the summer months. We expect our flow from the bell-flower to begin the last of November or the first of December, so we must begin preparations for this month in advance—and here comes the rub; our dry season (or honey-dearth) has only just closed when the harvest of bell-flower is at hand. This may seem strange to some, but the bell-flower, being one of the morning-glory family, is a trailing vine and a deep-rooted plant, and is not materially damaged by the short drouth; but the bees have not bred up strong during dry weather, and to make matters still worse, the nights through November are usually cool, that having a tendency to make the queens desert the brood-chambers and go above. So we have a double trouble, i. e., bees not very strong, and breeding in the top boxes.

During the last of November the colonies are all examined, what surplus honey they have is extracted, of those that are full of brood below and are breeding above, the brood in the top box is looked over and a sealed sheet placed on the outside next to either side-wall of the top box, and the centre is filled with freshly-extracted store-combs. The brood that is placed at the outside will hatch, and as soon as it does the bees will fill the combs with honey. The queen

will not go to the outside of the hive to lay in these combs, and the center ones being well drawn out store-combs, she is as completely shut off from laying above as though she was really confined below.

We have now accomplished two very important steps towards success, viz., first, breeding in the upper story is prevented, and second, by placing the brood to hatch on the outside, the bees will store there just as readily as in the centre, which you know they will not leave empty while the outside ones are being filled.

In every large apiary there will be a few colonies that do not prosper as well as their neighbors; all these on the first of November are confined to the brood-chamber and their top combs given to those that can use them. Now that we have the weak colonies on as few combs as they can manage, we make the best use of them we can; all we can do with them during November and December is to take what honey they store. It is now of no use to try to make them build up to strong colonies, for they will not do it until February, when they will breed all they need to; but during December and January we keep the brood together, and do not spread it, for the space would only be filled with honey, and the force of nurse-bees divided to the detriment of all concerned. By extracting the honey every week, and giving them no more combs than they can manage, very good results can be realized from a colony that is not strong enough to occupy 2 sets of combs. From our strong colonies we extract the honey every 5 or 6 days, thus keeping the combs empty, and by this constant changing, we get not only pretty nearly double the amount of honey, but the queen is left no chance to breed in them.

In conclusion I have only to say that after having spent many years in apiculture as a specialty, I have learned that the apiarist must become acquainted with his location, and know what to do, and when and how to do it. Many times he must use his own judgment about what kind of treatment the bees require, then go about it and give them that, and do not wait. Bee-men, like poets, "are born, not made." No rule or course of action can be laid down that can be followed out in detail in all localities.

Cuba, W. I.

For the American Bee Journal.

Bee-Keeping in Northeastern Mo., etc.

OTIS N. BALDWIN.

This is not a very good location for bee-culture, as regards honey production, and therefore I would not advise any fortune-hunters to come here to start an apiary. During the year 1883 bees did well here, as was universally the case. This was what I call a bad streak of good luck, or *vice versa*; for it gave everybody the bee-fever—the old men, the boys, the cripples, the old maids, and even the hired girls in this section entered upon the uncer-

tain sea of apiculture. No doubt many dreamed of the untold fortunes they were soon to receive from the labors of the bees, but in 1884-85 the honey crop here was very light, bees have barely stored enough (generally speaking) to live on, and many have even starved; besides, the winter of 1884-85 was ruinous, fully one-half of all colonies here having perished, and what did survive came out in the spring so weak that it took all the white clover season to build them up.

I have been a constant reader of the AMERICAN BEE JOURNAL, and I have read the discussions with great interest, especially as regards size of hive. I think that the size of hive depends very much upon the locality. For instance, in a great honey-yielding district I think that a 10-frame hive would be the proper thing, for in this case, where honey is constantly coming in, the swarms are necessarily larger, as the queen is kept constantly laying, and with 7-frames they would do nothing but swarm, which, to my notion, would be the ruination of a honey crop; but in a place like this, where bees only gather honey from June 10 to June 25, and from August 10 to August 25, ordinarily, we have no use for hives larger than 8-frames; and I believe that 7 are better.

I am rather inclined to Mr. Heddon's views, all things considered, and I believe that the same amount of money invested in small hives will be more remunerative, taking one season with another in districts like this; but if you are in a great honey-producing section, and want to average 400 lbs. per colony, I agree with Mr. Dadant in using a 12-frame hive.

Yesterday I took my bees out of the cellar for a flight, having been confined 60 days, and on examination I did not find more than a handful of dead bees in 28 hives; to-day they had a good flight, and now I will put them back.

Clarksville, 8 Mo., Jan. 1, 1886.

For the American Bee Journal.

The Insect-Wax of China.

C. THEILMANN.

The following is taken from the *Acker und Garten-Bau Zeitung*, of Milwaukee, Wis., that paper having taken it from the Hong Kong *Daily Press*. It will probably be read with much interest by many readers of the AMERICAN BEE JOURNAL. The article is as follows:

"It is quite a new fact that the Chinese insect-wax is being exported; no wonder that it is generally little known. This wax is mainly composed of wax-acid combined with Oxide of Cerotyl, and is used in England in the manufacture of the best tapers which are at present too costly for general use. There are nearly 500 tons of beeswax imported into England yearly, and as Chinese insect-wax can in the highest degree be appropriated the same as beeswax, it will bespeak a great future.

"Within the past few years the Chinese insect-wax has drawn the at-

tention of the French Government, which has made trials in Algeria to climatize the insects and their mother-tree there; also the director of the Kew Gardens, Sir Joseph Dalton Hooker, has had his attention drawn to their produce, and has applied to Sir Harry Parks for better information about the insect and its white wax, and to learn more about the insect and wax-trees, and last, about the wax product. Sir Harry Parks gave the commission to Mr. Hosie, to visit the wax-producing territory of the Chinese Province, Szetschnen.

"Mr. Hosie thereafter traveled and searched in June and July, 1884, the interior of Szetschnen, studied the case at that place, and made a report thereof to the English Government, which report was published in the second Chinese Bluebook of 1885. This report is positive, and explains fully, though the writer has classified it in a way that is rather hard to understand, having classified it in four rubrics, viz.: 1. The insect-tree. 2. The insect. 3. The wax-tree. 4. The wax. It looks as if some parts of the Province of Szetschnen were extraordinarily favored for the industry; likewise the Chien-chang-valley, the Chin-wie-territory, and the neighborhood of Chung-ching where the tree in which there is suspected *Ligustrum Luzidum*, is growing wild.

"Mr. Hosie failed to give the correct situation of these places, but we find in Playfairs' (Cities and Towns of China), that all the vicinities where the tree grows in profusion, and where the above industry is in its full bloom, lies between the 29th and 30th degrees north latitude, and 103 to 104 east longitude. In the aforesaid districts there is great activity in scraping the pea-like outgrowths or galls, off the limbs of the insect-trees, to export them to the different places—Szetschnen and other provinces, especially to Hunan and Kweichow. Each of these galls contains a little colony of very small, brown insects, which look like small lice, and each of them has six legs and a pair of antennæ which are of wedge form; sometimes they have also a small white cocoon which contains a bug, called 'buffalo-beetle,' which also has six legs and a long trunk that is armed with a pair of pincers.

"These galls are yearly (during the latter part of April) taken from the limbs of the insect-trees, and 20 to 30 pieces rolled in the leaves of the wood-oil tree and tied with rice-straw, or they are put in paper packages which weigh about 12 Chinese ounces, and are valued from $\frac{1}{2}$ to 1 tael. The buyers of these galls, which are possessors of wax-trees in Szetschnen or other provinces, take these packages with the galls and hang them on the bushy twigs of the wax-tree, after making some rough holes in the leaves for the progress of the gall inhabitants. Mr. Hosie does not give the name of this tree; he left that part to the director of the Kew Gardens, to whom he sent parts of the tree. The wax-tree is thought to be an ash and is called *Traxinus Chinensis*.

"Mr. Hosie observed, as soon as the gall packages were hung amongst the twigs, the following:

"Each gall contains a live 'buffalo-beetle' which bores a hole in the bark of the gall through which the larvæ escapes. At first they are unable to fly, and for sometime stay in company with some 'buffalo-beetles' of both sexes on the bushy twigs of the wax-tree, and after they get wings they lay small eggs and deposit them on the twigs. Afterwards the wax-insects crawl through the holes which was made by the 'buffalo-beetle,' and crawl rapidly on the twigs of the wax-tree; after a stay of about 13 days on the leaves of old twigs, and after they have shed their coat, they climb to the tender twigs where they settle on the under side to fasten their mouths in the bark whereby a liquid gushes forth and incrusts the twig with a thick layer of wax. Meanwhile, the eggs of the 'buffalo-beetle' hatch out also, and these insects are called the wax-hounds which follow the wax-insect for their prey; the latter are destroyed by the wax-grower. In about 3 months the wax crust is about $\frac{1}{4}$ of an inch thick, and the twigs are then cut off, the wax picked off by hand and thrown into boiling water, and the melted mass is moulded. This is the wax for the trade.

"The twigs are also boiled to be entirely cleared of the wax. The insects which sink to the bottom while it is boiling, are pressed out and given to the hogs for food. The owners of the wax-trees have but little expense, and the industry, on the whole, is very profitable. In good years, a package of Chien-Chang-galls costs about $\frac{1}{4}$ of a tael, which produces from 3 to 4 catties of wax. Its present price is 40 taels per pikol. In unfavorable years not more than one cattie of wax from a package of galls is expected, whereby the wax-industry stands a great deal of risk, where the owners of the wax-tree does not also have the insect-trees, and rears the insects himself. We mention that the latter is known to the entomologists as *Tutalimbata*."

Thielmantion, o-Minn.

For the American Bee Journal.

Bees and the Fruit-Growers.

C. H. COGSWELL.

While attending the meeting of the Illinois State Horticultural Society, at Centralia, Ills., during the present week, I took occasion, in the interest of bee-culture, to inquire of some of the fruit-growers for their opinions and observations as to whether bees were in any way the natural enemies of fruit-growers. The unanimous expression, so far as I obtained it, was in favor of the bees. All admitted that, at times, bees work largely on the juices of fruits, but none believed that they puncture the skins of grapes or other fruits.

In some localities in the southern part of the State, much complaint was made against birds, particularly

the cat-bird and oriole. One fruit-grower, in one of the lower counties, was said to have expended 200 pounds of shot on them. No complaint was lodged against the honey-bees. When other and better forage was scarce, they worked freely on grapes and other sweet fruits which had been punctured by birds, or which had burst their skins from diseased or luxurious growth. Such fruit, it was admitted, was of little value if not sucked out by the bees, for it would speedily decay or dry up.

A public expression of the Society might be valuable. Perhaps it has already been given, but I have not noticed it in former reports.

Virden, 9 Ills., Dec. 11, 1885.

For the American Bee Journal.

Location vs. Cost of Production.

C. W. DAYTON, (116).

On page 728 of the AMERICAN BEE JOURNAL, for 1885, C. P. Dadant says that I "suggest very correctly that if the honey crop lasts only 20 days, there is no need of having any larger hives than the queen can well fill with brood between the winter and the few days previous to the honey crop." In this it is evident that he made a mistake of 17 days, which, added to 20, equals 37 days—about the length of time which is required to get bees from freshly laid eggs, into the fields as honey-gatherers.

Mr. Dadant also asks if the honey crop, throughout the Northern States, lasts only 15 or 20 days, as it does at times in my location. It will be found that I did not say that I had known the honey crop to last not more than 15 or 20 days in any location, but what I did say is this: "Provided the honey harvest lasted not more than 15 or 20 days, as that from white clover has been known to do, it would be wisdom to shut down on brood-rearing 15 or 20 days before the arrival of the honey harvest." From the sentence, "The honey harvest generally does not last more than 3, 4, 5, and occasionally 6 weeks, or 42 days," written by Mr. Chas. Dadant near the top of page 774 of the AMERICAN BEE JOURNAL for 1885, I infer that in his (C. P. Dadant's) location, the honey crop has been known to last not very much more than that length of time; and that 28 days is not very far from the average. That is how the honey harvest lasts in Illinois.

Mr. D. A. Fuller, on page 762 of the same volume, says: "I do not see how location can make any difference, as a large swarm is better at any time than a small one." Does Mr. Fuller fail to see how an average swarm at the beginning of the honey harvest may be equally as profitable as a larger swarm in the middle of the honey harvest? Can he get large swarms as early in the season as average ones, or does he have to hold his colonies back in the spring, in order to keep them from getting too strong? But perhaps Mr. Fuller is comparing large swarms with swarms of about the size that

the third or fourth swarm from a colony generally is. Now I do not think that Messrs. Heddon, Hutchinson, or any one else, have expressed a liking for swarms of that kind, and though the hives used by them have been called small, it was not because they were too small for average colonies at the average time of the beginning of the honey harvest, in average locations throughout the Northern States; nor have they been called small hives because there was anything "teenty-taunty" about them, but because they are a shade smaller than some other hives which are in use, and because their size is best suited to the wants of an average colony of bees when viewed from a dollar-and-cent stand-point.

I am aware that in a hundred colonies there are exceptions of perhaps 10 weaker and 10 stronger colonies than the average, and that one is necessary as a help for the other in making all colonies average.

While dealing in facts, we might say that it is a close, if not a desperate, race we will run if we make the colonies average 8 solid combs of brood by the beginning of the honey-flow. Yes, in my locality I have known whole apiaries to occupy 15 or 20 days of a heavy yield of honey from white clover, in gathering strength to be able to decently take advantage of a 4 or 5 days' flow of honey from basswood. In a case of this kind it is probably needless to say that the large swarms would not be very numerous, and it need not be an apiary of small (average) hives either.

Bradford, 6 Iowa.

Read at the Detroit Convention.

The Pollen Theory.

A. J. COOK.

The pollen theory as I understand it, is simply this: Under certain circumstances bees may winter with less liability to diarrhoea, disease and death, in case there is no pollen or bee-bread in the hive to serve as winter food.

There are reasons drawn from experiment, I think, for the belief that facts sustain the theory. For several years we have tried to arrange our bees so that some should have abundance of pollen in their hives, while others should be destitute of the same, making a careful record in each case. While we have never lost a colony by diarrhoea during these experiments, we have had several cases of such disease, but never in colonies where the pollen was all excluded. In truth, the main portion of the diarrhetic excreta is almost always—if not always—composed of pollen grains, thus showing that pollen was present, if not the cause of the trouble. Careful examination of bees from colonies with no pollen—some dead, others alive and lively, show little and frequently no pollen in their intestines.

Now with the theory and these facts in mind, let us study briefly the nature

of food, and see whether or not physiological science has any facts or suggestions to offer us regarding this question.

There are four kinds of food, each of which probably enters more or less largely into the food regimen of all animals. Of these the inorganic, such as water, lime, chloride of sodium, or common salt, etc., are important as entering into the structure of organs; preserving the requisite consistency of tissues, and in aiding the vital processes. Thus it is necessary that blood, or the nutritive substance of the animal body, should be liquid. A large proportion of water keeps it so; hence, what wonder that water is so essential to life, and so craved and sought after by most animals. In all vital activity, osmosis—or the passing of liquids through animal membranes, is all important; common salt promotes this osmosis, and thus it is that salt has such saving properties. Hence those of you who believe so heartily in giving water to bees may still rejoice in that you are improving the blood of your pets, while those who take pleasure in adding salt, may exult as you affirm, "here goes for osmosis!" These inorganic elements are usually obtained in sufficient quantities in the general food, though water is generally required in larger quantities and must be had in addition, separately, to secure the best health and greatest strength. We have all seen bees sipping water, and often in such places as to suggest that the addition of salt is very welcome to them. All kinds of food are required in greater quantity when the vital activity is increased, hence our bees will need more water as breeding, storing, or other work is increased in the hive.

The second kind of food is known under the term carbo-hydrates. It includes all the sugars and starch. As starch, when eaten, is changed under the influence of a ferment, into sugar, we may well consider it with the sugars. The carbo-hydrates consist of oxygen, hydrogen, and carbon—the two former in proportion to form water. It is a matter of common observation that when the carbo-hydrates enter largely into the food, the animal is apt to gain rapidly in fat. We are not sure that the sugars are changed directly into animal fat, possibly they serve so admirably as food, that they produce such an excellent condition of the animal system, that all the food is utilized, and a surplus is at hand which is stored up as fat. May be the nitrogenous food as well as the sugars aid in forming the fat of the body; in either case the food must be chemically changed in that wonderful laboratory, the animal organism. The fact remains that much sugar in the food promotes the deposits of fat. We all know how the feeding of corn increases the fat, and does not the fact that corn contains over 67 per cent. of starch, which when eaten and digested is all changed to sugar, enforce the position here taken? Again, when animals hibernate, or when they are long sick and take no food, the stored fat is used up. Thus, if this stored fat can for a time serve the purpose of

all food, it is not unreasonable to conclude that all organic food may under the best conditions be converted into fat. We positively know that animals may eat all muscle—as beef's heart—and yet the liver will form glycogen, which in turn becomes liver sugar, and, as we have seen in the marvelous economy of the body, sugar promotes the formation of fat, it may be that all food under the best conditions conduces to the storing up of fat, and that sugar powerfully aids to bring about just this most favorable condition. These carbo-hydrates are often styled the heat-producing foods. I think this term false and misleading. It is probable that all food, of which these sugars are an important part, are to nourish or to build up tissues and carry on the organic processes. This vital work generates heat. Heat is incidental. Nutrition is to build up and keep the body in working condition; in doing this the body is kept warm.

We have seen that stored fat in animals that hibernate, and in case of disease, will alone serve to keep up the nutrition. We have also seen that these carbo-hydrates conduce more than other food to the formation of this fat. Is it not scientific then to urge that the pure carbo-hydrates are the best food on which to winter our bees? And this is enforced, I believe, by experience and by nature as well, for I doubt not but that in most cases in nature, almost the entire food of bees while they are quiescent in winter, is honey.

Let me state further that cane sugar which composes from one to eight per cent. of honey, when eaten by any animal, man included, is changed in the stomach to a sugar much like, if not identical, with honey. The bees do the same with nearly all the cane sugar or nectar, or with most of the cane sugar when they feed upon it. Hence it is more than likely that honey is one of the most healthy and nutritious of all our sugars; that the bees have done for us what we would have to do for ourselves had we eaten the cane sugar. Who has not found that honey seems to go further, and satisfy more quickly, even than cane sugar when eaten on our tables? One more point, common glucose, or grape sugar,—I now mean the artificial product produced by the action of sulphuric acid on corn starch—honey, and liver sugar are usually all called glucose or grape sugar by chemists. They are chemically identical, and give the same reactions with the copper salts which they all reduce, which fact furnishes one of the best tests for these sugars. Yet I do not believe they are the same. Physiologically they seem quite different. Why, when we eat glucose, is it changed to glycogen in the liver and then to liver sugar, unless the latter is more easily assimilated? Why do bees thrive on honey, and die when fed the artificial glucose? Why do bees refuse to eat artificial grape sugar when honey or nectar is to be had? All these facts seem to indicate what I believe to be true, that physiologically honey, starch, glucose and liver glucose are really dif-

ferent. Taste and vital action are nicer chemists than our scientists, and detect differences which the latter as yet fail to recognize. It is possible that honey and liver glucose are identical. The fact that both arise in the animal body under the influence of the digestive ferments would make this view plausible.

The third group of food elements consists of the fats. The higher animals obtain these largely in all vegetable and animal food. While the fats, also called by some the hydrocarbons, consist of the same chemical elements as do the carbo-hydrates, the oxygen is far less in amount. Actual experiment has shown that higher animals thrive poorly without some of this kind of food. Its value is farther attested by the appetite which craves fat, especially if the weather is cold. Bees get some of this kind of food in their pollen. It seems quite likely that the stored fat of the body may come in part from the fat eaten, though this is not certain. It is certainly true that all does not, as animals are often known to store much more fat than is taken with their food. It is quite likely that most fat eaten goes to serve the current needs, while some of the carbo-hydrates and the nitrogenous food, and quite likely some fat is, through the wonderful economy of the vital organism, changed into and stored up as fat. That nitrogenous tissues may be robbed of their nitrogen and further changed into fat, is proved by disease where fatty degeneration is noticed. This may occur in all organs. In some cases, as in fatty degeneration of the heart, almost pure muscle is transformed into fat. Bees get but little fat in their food, and so this group of food elements interests us less than do the others.

The albuminoids or nitrogenous food elements make up our last group. These have, in addition to the oxygen, hydrogen and carbon—nitrogen. All protoplasm or active vital tissue, whether animal or vegetable, consists largely of this nitrogenous material. But as all organs get their substance from the food, it becomes evident that the albuminoids are absolutely essential in food. Higher animals get this albuminous food in all vegetables, in muscle, eggs, cheese, etc. Bees also get it from vegetables, usually from honey which contains from .2 to .6 per cent. albuminoids and from pollen, often from fungoid spores, and occasionally from various kinds of flour or meal. This kind of food must furnish the elements for building up all the protoplasm of the body which form a large proportion of all the vital organs and tissues. We have already seen that some of this nitrogenous food may be transformed into fat.

As no animal can possibly be developed from the egg to adult life without this albuminous food, and, as in all vital action, some of this material in the body is used up and must be restored, it follows that brood-rearing in the hive and activity of the bees necessitates the presence of these albuminoids in the food.

As honey contain no albuminous food, except the pollen in it, it follows that bees must have bee-bread to rear brood, and also to preserve their organisms intact during the busy part of their existence. To say that bees may breed with no bee-bread, or that the active workers need none, is to say that you can have an ocean without water, a desert without sand, or bricks without clay.

We know that hibernating animals, and animals long sick, often fast for months. Yet here the vital forces must be kept up and must have nourishment. We have seen that in such cases the fat is used up, and without doubt the protoplasm in muscle and other inactive tissues yield up of their substance to furnish the small amount of albuminous nutriment needed. If we could keep our minds and bodies wholly inactive, we should need but little nitrogenous food.

We may conclude then, reasoning from real hibernation, where animals are wholly inactive, from cases of long sickness, and from higher animals in a state of quiescence, that our bees during their winter quiet in cellar or clamp, when the vital activities are at a minimum, have enough of the albuminoid elements in blood and tissues and may thrive on a pure carbonaceous diet. Analogies, as pointed out, make the hypothesis tenable.

Again, bees are naturally very neat and do not void their excreta in the hive except under the severest stress of circumstances. I have more than once gathered all the refuse under a full colony of bees at the close of the of a long winter's sojourn in the cellar, and found almost no nitrogenous matter. If, then, bees are to be forced to long confinement, we should spare no pains to secure the greatest possible quietude. Just the proper temperature, I think, will, under favorable circumstances of food and air, secure this quiescence. But in case the temperature or ought else should irritate, then it were better that no pollen should be eaten, for without it breeding, which demands great activity, would be impossible, and in its absence the active digestion necessary to liquify albuminous food would be avoided. It is a generally recognized fact that an inactive life needs little, and is better with little albuminous food. Indeed, albuminous food, as we have seen, subserves the vital activities; of course, then as we reduce these, we reduce the required amount of nitrogenous aliment.

Again, the indigestible portion of the carbonaceous food, especially the carbo-hydrates, is very slight. Not so with pollen. We can readily see then that where the feces are to be retained in the intestines as long the pollenaceous food would be or might be irritating, and were better withheld.

We thus see that from experience, from analogy, and from what we know of foods and the vital activities, we may well believe that our bees were better off in many cases were pollen absent from their winter aliment.

Agricultural College, ♀ Mich.

For the American Bee Journal.

The Marshall Co., Iowa, Convention.

The Marshall County Bee-Keepers' Association met at the Court House in Marshalltown, Iowa, on Oct. 17, 1885, President O. B. Barrows in the chair. The minutes of the April meeting, as published in the AMERICAN BEE JOURNAL, were read and approved.

The subjects, "Fall and winter care of bees," and "Care and sale of honey," were discussed. It was the general impression that all should work together in keeping up the price of honey, and also should endeavor to put up honey in neat packages, and pay no attention to the jammed up mess that is offered for sale in tubs, boxes, etc., at just any price that a buyer feels disposed to give. The consumers, as a rule, will give double for comb honey in nice, straight combs in one and two-pound sections, than they will for honey of various grades and cut out in all kinds of shapes. We must not put our first-class honey on the market to compete with this class in price.

A number of the members made their reports for the past season, but this is omitted at this time, as we desire to get a more complete report at our next meeting.

The subject for discussion at the next meeting will be "Spring management of bees," and the following members were appointed to read essays: L. Coeper, "Honey-plants;" G. W. Keeler, "Extracted honey;" W. P. Covey, "Comb honey;" and Mrs. J. M. Van Meter, "Bee-keeping."

The convention then adjourned to meet at the Court House in Marshalltown, Iowa, on Saturday, Jan. 16, 1886, at 10:30 a.m.

J. W. SANDERS, Sec.

OUR CLUBBING LIST.

We supply the American Bee Journal one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

Price of both. Club	
The American Bee Journal	1 00..
and Gleanings in Bee-Culture	2 00.. 1 75
Bee-Keepers' Magazine	2 00.. 1 75
Bee-Keepers' Guide	1 30.. 1 40
The Apiculturist	2 00.. 1 75
Canadian Bee Journal	2 00.. 1 75
Texas Bee Journal	2 00.. 1 75
The 7 above-named papers	6 50.. 5 50
and City and Country	2 00.. 1 50
New York Independent	4 00.. 3 30
American Agriculturist	2 50.. 2 25
American Poultry Journal	2 25.. 1 75
Journal of Carp Culture	1 50.. 1 40
and Cook's Manual	2 25.. 2 00
Bees and Honey (Newman)	2 00.. 1 75
Binder for Am. Bee Journal	1 75.. 1 60
Apiary Register—100 colonies	2 25.. 2 00
Dzierzon's Bee-Book (cloth)	3 00.. 2 00
Dzierzon's Bee-Book (paper)	2 50.. 2 00
Quinby's New Bee-Keeping	2 50.. 2 25
Langstroth's Standard Work	3 00.. 2 75
Root's A B C of Bee-Culture	2 25.. 2 10
Alley's Queen-Rearing	2 50.. 2 25
Farmer's Account Book	4 00.. 3 00
Guide and Hand-Book	1 50.. 1 30

Local Convention Directory.

1886.	Time and place of Meeting.
Jan. 13-15.	Nebraska State, at Lincoln, Nebr. W. F. Wright, Sec., Johnson, Nebr.
Jan. 16.	Marshall Co., at Marshalltown, Iowa. J. W. Sanders, Sec., LeGrand, Iowa.
Jan. 19.	N. W. Ills. & S. W. Wis., at Freeport, Ills. Jonathan Stewart, Sec., Rock City, Ills.
Jan. 19-21.	Maine, at Skowhegan, Me. Wm. Hoyt, Sec., Ripley, Me.
Jan. 20, 21.	Indiana State, at Indianapolis, Ind. F. L. Dougherty, Sec., Indianapolis, Ind.
Jan. 20, 21.	N. E. Ohio & N. W. Pa., at Meadville, Pa. C. H. Coon, Sec., New Lyme, O.
Jan. 21.	Champlain Valley, at Middlebury, Vt. R. H. Holmes, Sec., Shoreham, Vt.
Jan. 23.	Hancock County, at Findlay, O. S. H. Bolton, Sec., Stanley, O.
Jan. 26-28.	Eastern New York, at Albany, N. Y. E. W. Philo, Sec., Halfmoon, N. Y.
Feb. 4.	Wisconsin State, at Madison, Wis. Dr. J. W. Vance, Sec., Madison, Wis.
Feb. 3.	N. E. Michigan, at East Saginaw, Mich. W. Z. Hutchinson, Sec., Rogersville, Mich.
Apr. 27.	Des Moines County, at Burlington, Iowa. Jno. Nau, Sec., Middletown, Iowa.
Oct. 19, 20.	Illinois Central, at Mt. Sterling, Ills. J. M. Hambaugh, Sec., Springfield, Ills.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

No Sign of Disease.—R. F. Holtermann, Fisherville, Ont., on Jan. 4, 1886, says:

My bees (in clamps) had an opportunity for a flight on Dec. 30, the weather being sufficiently mild, but only the very strongest availed themselves of the warmth. I consider this a very favorable omen; if the others had been restless they doubtless would have shown themselves. Those flying showed no sign of diarrhea.

Mild Weather, etc.—John Morris, Mauston, Wis., on Jan. 1, 1886, writes:

The winter, so far, is getting to be what I would call a very mild one, and it should make bee-keepers happy. Wisconsin is not so bad after all, but when she does her best we generally shrink before the wintry blasts. To get the AMERICAN BEE JOURNAL for one dollar a year seems like getting a good paper for half what it is worth. The questions that are answered in the Query Department alone make the paper worth more than the subscription price to any one having a few or more colonies of bees. They cannot well afford to get along without it.

Good Swarming Season, etc.—W. G. Russell, Millbrook, Ont., on Dec. 31, 1885, writes:

I have now about 140 colonies of bees packed for winter, 122 of which are in chaff or sawdust hives, and the balance are packed in forest leaves in

a long bin or house. Last winter I lost only 7 light colonies out of 84. The past season has been only a medium honey season, but an extra good swarming season. We have had an open, warm fall, and we have had only about ten days of sleighing so far this winter. It all went off about a week or ten days ago, and has not returned yet. Bees are flying a little to-day. The temperature is about 48°.

Bee-Keeping for Women, etc.—Mrs. Dr. E. H. Mason, New York, N. Y., on Jan. 1, 1886, writes:

I am still engaged in bee-culture, and must insist that it is a pleasant occupation and healthful for women. I still own property in Vincennes, Ind., and I go there the last of April to set my bees to work. I manage them entirely myself all summer. On Sept. 1 I prepare them for winter under water-proof sheds, facing them south, with a close board-fence at the back. I allow them to fly when it suits them, and forbid my tenant to even go into that part of my premises. I think that the reason I am so successful is that I put my bees up in September, and never allow them even to be jarred or moved until spring. I have always managed my bees that way, and I have never had them freeze even in the coldest weather. I have at present 80 colonies. I have resided in New York from September until April, for the past three years, so I am a citizen of the East for eight months of the year, and a citizen of the West the balance of the year.

Light Honey Crop.—H. N. Graves, Palmyra, Wis., on Jan. 1, 1886, says:

On April 8, 1885, I took 10 colonies of bees out of the cellar, 5 of which died with "spring dwindling," and 2 more were robbed, so that left me 3. I bought 15 colonies more, and have had very good success, considering the season. It has been very rainy, and the honey crop was very light. I put 40 colonies in the cellar on Dec. 6, 1885. My crop consisted of 700 pounds of comb honey, from 18 colonies, spring count. I have sold all my honey at 15 cents per pound at home.

My Experience in 1885.—S. J. Church, Cedar Rapids, Iowa, on Jan. 4, 1886, writes:

I commenced the season of 1885 with 78 colonies, some of which were very weak, but the most being in fair condition. My winter losses were 6 in the cellar and 9 after putting them on the summer stands on April 1. After a few days I moved them about $\frac{3}{4}$ of a mile, into an orchard of apple and cherry trees. They built up finely on fruit-bloom. On June 1 the white clover began to open a little, and it bid fair to be a large crop; also the basswood was very promising; then came a fearful hail-storm that cut everything down clean, trimmed the fruit-trees and basswood badly, and the clover looked as if the life had been pounded out of it; and when I "viewed the landscape o'er," and saw

the desolation, my hopes were completely blighted, but in a few days the clover started up and bloomed so that I got about 1,000 pounds of honey by July 10. Then the bees got some honey from basswood outside of the track of the hail-storm. It has been a hard honey season for me. My increase of colonies was 32, mostly by natural swarming. After doubling up some colonies I had 105 left, nearly all of which were in good condition to put into the cellar for winter, which I did on Dec. 7. They are now in a very quiescent state, at a temperature of 46°. During the season I took 1,500 pounds of extracted honey and 200 pounds of comb honey. My expenses were \$126.95 and my receipts \$132.48.

Hives from Artificial Stone.—John Turnbull, La Crescent, Minn., writes thus concerning a new material for making hives:

I have been keeping bees for 18 years, but I never gave them much attention until about 2 years ago. I now have 22 colonies in the cellar. I have learned more about bees in the few months since I have been taking the AMERICAN BEE JOURNAL, than I had ever learned in all my life up to that time. I recently had a conversation with a stone-firm here, about making bee-hives out of their artificial stone. They said that such hives would be much better than wooden ones, as they would not be affected by the hot sun in summer, and as the material is a non-conductor of heat, neither would it be affected by the cold. Hives constructed of such material would be light and durable, and a hive of the Langstroth size would weigh about 30 pounds, and cost 30 cents. I intend to give them a trial. I would be pleased to hear through the columns of the AMERICAN BEE JOURNAL what our practical bee-keepers think in regard to stone houses for our bees.

Reversible Frames, Section-Cases, etc.—T. M. Coleman, Glendon, Iowa, on Jan. 4, 1886, writes:

In the report of Mr. Jeffrey, of Connecticut, on page 821 of the AMERICAN BEE JOURNAL for 1885, I notice that he says, "One apiarist has tried the 1½-inch wide end-bar, with reversible wire," etc., and I would like to know more about them. I am puzzled to know how to reverse frames, hives, and section-cases, in the best manner. I use a Simplicity hive of the Langstroth size, 14 inches wide, 9 frames, ⅞-inch top and end bars sawed out of plastering lath, and spaces between the frames filled with sticks sawed off of lath used for frames. The ends of the hive are rabbeted, and have tin strips for the frames to rest upon. When tiering up I take the sticks out and place another hive, or half hive for sections, on top; all have square joints, and no fastenings of any kind. The top and bottom boards are alike, 18 inches wide and 24 inches long, with cleats only on the

ends to keep them from warping. They are dressed and painted on both sides, but have no fastenings, thus making the cheapest and simplest hive I ever saw. But I want some way to invert frames and cases for sections, and Mr. Jeffrey's plan seems to me the best I have heard of, but I do not understand the "reversible wire" nor "Quinby standing frames," or how they could be used one time as standing frames and at another time as hanging frames. I have kept bees for 3 years, have read books and papers, and have learned enough to make me anxious to know more. Last winter I lost 17 colonies out of 29 in an outside cellar or "cave" where it froze considerably. Now I have 24 colonies in good, warm cellars, and I obtained 1,164 pounds of honey from them last season, about half of it being comb honey and the balance extracted honey.

Colonies Packed for Winter, etc.—Robert Osborne, Danville, Ill., on Dec. 31, 1885, writes:

In the fall of 1884 I had 74 colonies; I sold 6, and started in the winter with 68—59 packed on the summer stands, 2 without packing, and 7 I put into the cellar. When the time came that bees could make their living again, I had 48 colonies left, i. e., if I call every one that had a queen a colony, but there was quite a number that were very small nuclei colonies that required lots of help to get them ready for the honey-flow, which was good in this locality, while white clover and basswood lasted. By July 20 I had increased my apiary to 87 good colonies, and had taken 2,000 pounds of comb honey in 1 and 1½ pound sections, and I had extracted 1,000 pounds. The bees did not do much in the sections after that, but stored everything full in the brood-chambers. My honey crop for 1885 amounted to 2,300 pounds of comb honey, 1,400 pounds of extracted honey, with an abundance to carry the bees through without feeding sugar. I have 60 colonies packed on the summer stands, and 27 colonies and 1 nucleus in the cellar under the house. I have sold nearly all of my comb honey and about half of the extracted.

The New Bee-Disease.—W. B. Thorne, Glenn, Kans., on Jan. 4, 1886, writes:

As I asked Query, No. 133, it might be well if I should report progress concerning the bees there mentioned. About 3 weeks prior to the meeting of the "Western Bee-Keepers' Association," held at Independence, Mo., on Oct. 15 and 16, 1885, I determined to try and see if the stores that the colony had was the cause of the malady. I took the stores from them and gave it to another colony that was in a healthy condition; no injurious effect resulted therefrom. I then gave the diseased colony sugar stores; no benefit appeared to result. I therefore determined to take them 20 miles in a wagon, to the savants, for treat-

ment; but no one could prescribe for them. I was not in a mood to drive with becoming respect to a colony of bees; however, contrary to my expectations, after the good shaking up of a 40-mile ride, they improved very rapidly, and are now tucked up snugly in the cellar, and I expect to get them through the winter in good condition. They however kept a few drones up to the last examination, which I made about Dec. 15. My advice is to take bees to your local conventions, if you have any that are troubled with the new malady; and if you have no diseased bees to take, do not let that detain you from attending, for there is money in it.

Convention Notices.

☞ The annual Convention of the Indiana State Bee-Keepers' Society will be held at Indianapolis, Ind., on Jan. 30 and 31, 1886. The meetings of this Society have been very successful in the past, and the coming meeting promises to be still better. The meeting will be held in the rooms of the State Board of Agriculture, and it is one of a series of meetings held by the different Societies of the State, which pertain to the specialties of Agriculture, viz., Dairying, Wool-Growing, Swine-Breeding, Poultry-Raising, etc. Reduced rates are offered at Hotels, and everything possible will be done to make the meeting entertaining and instructive. A very complete program is being prepared, with ample time to discuss the important subjects of particular interest to bee-keepers. A cordial invitation is extended to all bee-keepers, with the hope that they will attend, and thus make the Convention of still greater importance.

FRANK L. DOUGHERTY, Sec.

☞ The annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Freeport, Ills., on Tuesday, Jan. 19, 1886.

JONATHAN STEWART, Sec.

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 21, 1886.

R. H. HOLMES, Sec.

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will hold its seventh annual convention at Meadville, Pa., on Wednesday and Thursday, Jan. 20 and 21, 1886.

C. H. COOK, Sec.

☞ The Eastern New York Bee-Keepers' Association will hold its annual convention in Agricultural Hall at Albany, N. Y., on Tuesday, Wednesday and Thursday, January 26—28, 1886. The first session will begin on Tuesday, at 2 p.m. All interested in bee-keeping are requested to attend, and bring apiarian supplies for exhibition. The programme will consist of essays on important subjects, discussions, etc.

E. W. PHILO, Sec.

☞ The Hancock County Bee-Keepers' Association will meet at Findlay, O., on Saturday, Jan. 23, 1886.

S. H. BOLTON, Sec.

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, Sec.

☞ The Wisconsin State Bee-Keepers' Association will meet in the State Capitol at Madison, Wis., on Feb. 4, 1886, at 9 a.m. All who are interested in bee-keeping are invited to attend. The meeting will be held during the sessions of the State Agricultural Society, and bee-keepers who are also interested in topics relating to farming will have an opportunity to hear them discussed. Any bee-keeper having anything new in the management of bees are requested to bring it along for exhibition. Persons paying full fare coming, may obtain a return ticket at one-fifth of the regular rate.

J. W. VANCE, Sec.



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Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; but don't stop sending it. I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with \$4.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
 Monday, 10 a. m., Jan. 11, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—There is an easier tone to the comb honey market, and prices are fully one cent per pound less than at last quotations, 15c. being the price for white comb honey in 1-lb. sections, and some extra nice brings 16c. This is owing to small lots coming into different commission houses, and all being eager to sell, they underbid regular honey houses in order to do so. Extracted honey brings 6c. per lb.
BEESWAX.—24c. 25c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for comb honey is very flat and inactive, which we attribute to the continued warm weather, and prices are ruling correspondingly. We quote as follows: Fancy white comb in 1-lb. paper cartons, 14c. 15c.; the same in 1-lb. glassed or unglazed sections, 13c. 14c.; the same in 2-lb. glassed sections, 10c. 12c., and in unglazed 2-lb., 12c. 13c. Buckwheat honey in 2-lb. sections, 9c. 10c.; in 1-lb. sections, 11c. 12c. Extracted—white clover, 6c. 8c.; buckwheat, 5c. 6c.
BEESWAX.—Prime yellow, 25c. 28c.
 MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows: Choice comb honey, 10c. 12c. Extracted, in barrels, 4c. 5c. Extra fancy of bright color and in No. 1 packages, 1/4 advance on above prices.
BEESWAX.—Firm at 22c. for prime.
 D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is a very slow demand from manufacturers, for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4c. a lb. Supply and demand is fair for choice comb honey in small sections, which brings 12c. 15c. per lb.
BEESWAX.—Good yellow is in good demand, and arrivals are fair, at 20c. 22c. per lb.
 C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lb. for 13c. 14c., but there is not so much sale for the latter. Second grade honey is dull at 12c. 13c. Old white, 10c. 12c. Extracted, 7c. 8c. per lb.
BEESWAX.—Very scarce at 22c. 25c.
 A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are extremely light and prices are very low. Choice comb honey in 1-lb. sections brings 14c. 15c.; 2-lb., 12c. 13c. Dark fall honey 1 to 2 cents less. Extracted honey is very dull and of slow sale. We had to unload a lot of very fine extracted honey this week at 5c., and stocks continue to accumulate.
BEESWAX.—Scarce and higher—22c. 25c.
 CLEMONS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make sales. We quote comb honey in 1-lb. sections at 14c. 16c., and 2-lb. sections at 12c. 14c. Extracted, 6c. 8c.
BEESWAX.—30 cts. per lb.
 BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows: White to extra white comb, 10c. 12c.; amber, 7c. 8c. Extracted, white liquid, 5c. 6c.; light amber, colored, 4c. 4 1/2c.; amber and candied, 4 1/2c.; dark and candied, 4c. 4 1/2c.
BEESWAX.—Quotable at 23c. 25c., wholesale.
 O. B. SMITH & CO., 423 Front Street.

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for \$1.30.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

The Guide and Hand-Book, is a book of ready reference and an encyclopædia of everything desirable to know. As a guide to the home-seeker, it is invaluable. Its contents are partially given on page 32, and will convince any one of its value. We do not think any of our readers can afford to do without it. As a book of ready reference we find it of great value in our library. We will send the Weekly BEE JOURNAL for a year and the Guide for \$1.30.

Many Thanks are due to our friends for sending us so many new subscribers, when renewing their own subscriptions. The reduced price for 1886 has caused quite "a boom," and is a popular move in every sense of that word. As we do not wish any one to work for nothing, we have concluded to offer premiums for new subscribers for 1886, for in order to compensate for the reduction of our price to \$1.00, we should at least *thribble* our present subscription list.

For 1 new subscriber for a year (besides your own renewal) we will present you either of the following books—25 cents each.

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 For 3 new subscribers—all 3 of them; or the Western World Guide & Hand-book.

For 4 new subscribers—Bees and Honey, (\$1.)

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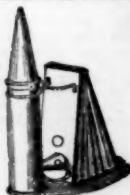
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